## NEW COMBINATIONS AND FORMS IN THE MISSOURI FLORA<sup>1</sup>

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During the course of preparation of a *Flora of Missouri*, the author has found it necessary to make a number of new combinations. In the present paper only the essential bibliography is given. The reasons for assigning the names to their new status are given in the forthcoming *Flora* or in separate papers.

Trillium pusillum Michx. var. ozarkanum (Palmer & Steyerm.) Steyerm., comb. nov. Based on *Trillium ozarkanum* Palmer & Steyerm., Ann. Mo. Bot. Gard. 22: 504. 1935.

Salix rigida Muhl, var. rigida f. subintegra (Palmer & Steyerm.) Steyerm., comb. nov. Based on Salix cordata Muhl. f. subintegra Palmer & Steyerm. in Ann. Mo. Bot. Gard. 25: 770. 1938.

Carya ovata (Mill.) K. Koch f. Nuttallii (Sarg.) Steyerm., comb. nov. Based on Carya ovata var. Nuttallii Sarg. Trees and Shrubs 2: 207. 1913.

Carya ovata (Mill.) K. Koch f. ellipsoidalis (Sarg.) Steyerm., comb. nov. Based on Carya ovata var. ellipsoidalis Sarg. Bot. Gaz. 66: 235. 1918.

Carya ovata (Mill.) K. Koch f. fraxinifolia (Sarg.) Steyerm., comb. nov. Based on Carya ovata var. fraxinifolia Sarg. Trees and Shrubs 2: 207. 1913.

Carya texana Buckl, var. texana f. glabra (Palmer & Steyerm.) Steyerm., comb. nov. Based on Carya Buckleyi Sarg. var. arkansana Sarg. f. glabra Palmer & Steyerm., Ann. Mo. Bot. Gard. 25: 770. 1938.

Quercus prinoides Willd. var. acuminata (Michx.) Gl. f. Alexanderi (Britt.) Steyerm., comb. nov. Based on Quercus Alexanderi Britton, Man. Fl. North. States Canada. 336. 1901.

Polygonum virginianum L. var. glaberrimum (Fern.) Steyerm., comb. nov. Based on *Tovara virginiana* (L.) Raf. var. glaberrima Fern. Rhodora 39: 404. 1937.

Arabis Shortii (Fern.) Gleason var. phalacrocarpa (M. Hopkins) Steyerm., comb. nov. Based on Arabis dentata (Torr.) T. & G. var. phalacrocarpa M. Hopkins, Rhodora 39: 169. 1937.

Rubus flagellaris Willd. var. occidualis Bailey f. roseo-plenus (Palmer & Steyerm.) Steyerm., comb. nov. Based on Rubus flagellaris f. roseo-plenus Palmer & Steyerm. Brittonia 10: 114. 1958.

Rubus flagellaris Willd. var. occidualis Bailey f. roseus Steyerm., f. nov. A forma roseo-plenus petalis plerumque quinque roseis differt. — Along low woods in valley of creek tributary to Castor River, T 29 N, R 8 E, sec. 5, 3¾ mi. northwest of Buchanan P. O., Bollinger Co., May 8, 1957, Steyermark 84212, HOLOTYPE, in Univ. Mo. Herb.

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Hypericum punctatum L. var. pseudomaculatum (Bush) Fern. f. flavidum Steyerm., comb. nov. Based on Hypericum pseudomaculatum Bush f. flavidum Steyerm. Rhodora 41: 585. 1939.

Rhododendron roseum (Loisel.) Rehd. f. albidum Steyerm., f. nov. A forma roseum corollis albidis differt. — Sandy pine-oak woods east of Chimney Rocks, along River Aux Vases, 5 miles east of Pickle, Ste. Genevieve Co., May 24, 1933, Steyermark 8522, HOLOTYPE, in Univ. Mo. Herb., ISOTYPE in Herb. Mo. Bot. Gard.

Diospyros virginiana L. var. pubescens (Pursh) Dippel f. pumila (Palmer & Steyerm.) Steyerm., comb. nov. Based on Diospyros virginiana L. f. pumila Palmer & Steyerm. Ann. Mo. Bot. Gard. 22: 616. 1935.

Mertensia virginica (L.) Pers. f. rosea Steyerm., f. nov. A forma virginica corollis semper roseis recedit. — Rich alluvial woods along north side of Big Creek, T 46 N, R 30 W, sec. 35, 4 mi. southeast of Pleasant Hill, Cass Co., April 17, 1949, Steyermark 67235, HOLOTYPE, in Herb. Chi. Nat. Hist. Mus.

In this form, which I have had growing in my wild flower garden for ten years, the corollas are deep pink from bud stage to the end of anthesis, never turning bluish as in typical f. virginica.

Physalis longifolia Nutt. var. hispida (Waterfall) Steyerm., comb. nov. Based on *Physalis virginiana* var. hispida Waterfall, Rhodora 60: 154-156. 1958

Physalis longifolia Nutt. var. subglabrata (Mackenz. & Bush) Steyerm. comb. nov. Based on *Physalis subglabrata* Mackenz. & Bush, Trans. Acad. St. Louis 12: 86-87. 1902.

Physalis longifolia Nutt. var. subglabrata (Mackenz. & Bush) Steyerm. f. macrophysa (Rydb.) Steyerm., comb. nov. Based on *Physalis macrophysa* Rydb., Bull. Torrey Club 22: 308. 1895.

Gerardia flava L. var. calycosa (Mackenz. & Bush) Steyerm., comb. nov. Based on *Dasystoma calycosa* Mackenz. & Bush, Rept. Mo. Bot. Gard. 16: 105. 1905.

Ruellia humilis Nutt. var. longifolia (Gray) Fern. f. alba (Steyerm.) Steyerm., comb. nov. Based on Ruellia caroliniensis (Walt.) Steud. f. alba Steyerm. Rhodora 41: 585. 1939.

Specularia perfeliata (L.) A. DC. f. alba (Voigt) Steyerm., comb. nov. Based on *Triodanis* (misspelled Triodanus) perfoliata (L.) Nieuwl. f. alba Voigt, Fl. S. Ill. 325, 1959.

Solidago arguta Ait. var. strigosa (Small) Steyerm., comb. nov. Based on Solidago strigosa Small, Fl. Se. U. S. 1198, 1339. 1903.

Solidago arguta Ait. var. neurolepis (Fern.) Steyerm., comb. nov. Based on Solidago neurolepis Fern. Rhodora 38: 212-213. 1936.

Antennaria neglecta Greene var. campestris (Rydb.) Steyerm., comb. nov. Based on Antennaria campestris Rydb. Bull. Torrey Club 24: 304. 1897.

Heliopsis helianthoides (L.) Sweet var. occidentalis (Fisher) Steyerm., comb. nov. Based on *Heliopsis helianthoides* subsp. occidentalis Fisher, Ohio Jour. Sci. 57: 189. 1957.

Helianthus annuus L. var. lenticularis (Dougl.) Steyerm., comb. nov. Based on *Helianthus lenticularis* Dougl. in Bot. Reg. t. 1265. 1829. INSTITUTO BOTANICO DEL MINISTERIO DE AGRICULTURA Y CRIA, CARACAS, VENEZUELA.

A MONUMENTAL WORK IS CONCLUDED.<sup>1</sup> — The appearance of Volume Four of the Illustrated Flora of the Pacific States brings to a close a project started over forty years ago by the late Professor LeRoy Abrams. Planned originally in three volumes, this four-volume work in many ways mirrors some of the growth and change in systematic botany during the period. The first volume, published in 1925, was patterned after "An Illustrated Flora of the Northern United States, Canada and the British Possessions" by Britton and Brown. It also followed that work in the use of the "American Code" to govern nomenclatural matters. But four years before volume two was issued in 1944, volume one was corrected to reflect adherence to the "International Rules" and was reissued.

Although it would appear from the publication dates of the last three volumes that these were largely the work of an emeritus professor (Abrams retired in 1940), such is not the case. In the first place, Professor Abrams was actively at work on this Flora from 1910 or thereabouts until 1948, when he became incapacitated by a heart ailment. Secondly, the whole work was not planned to be the product of one man. From the beginning, there were collaborators who contributed the treatments for families or parts of families, genera, etc. This system of obtaining manuscript and sometimes illustrations from specialists was followed throughout the entire work. However, there was one collaborator on the first volume whose role increased in importance as each successive volume appeared, until in the final volume, in the absence of Professor Abrams, she "saw it through" as author. I speak, of course, of Roxana S. Ferris. Mrs. Ferris' whole botanical career has been closely linked to the "Illustrated Flora". In the second volume, she picked up the loose ends and labored with technical matters of all sorts. Then, as Professor Abrams' health failed, she gradually moved into

<sup>&</sup>lt;sup>1</sup> Illustrated Flora of the Pacific States: Washington, Oregon and California. Volume IV — Bignoniaceae to Compositae, by Roxana Stinchfield Ferris. 1-732. Stanford University Press, Stanford, California. 1960. \$17.50.